

Claims

What is claimed is:

1. A method for selecting transport streams and program channels to reduce delay in resolving digital video images while channel changing, comprising:
 - receiving a channel signal spectrum including a plurality of digital video transport streams, each transport stream comprising a plurality of program channels;
 - tuning a first digital video transport stream that includes a current program channel;
 - selecting one or more additional digital video transport streams to tune based at least in part upon predictive channel selection and which program channels are multiplexed together in the transport streams;
 - tuning the one or more selected additional digital video transport streams; and
 - utilizing a plurality of program channels within the first digital video transport stream and within the one or more additional digital video transport streams to help reduce delay time in channel-changing.
2. The method of claim 1, wherein the tuning steps are performed utilizing a plurality of receivers integrated on the same integrated circuit.
3. The method of claim 2, further comprising decoding a plurality of program channels from each digital video transport stream to produce a plurality of video streams.
4. The method of claim 3, wherein the decoding step is performed with a decode processor integrated on the same circuit as the plurality of receivers.
5. The method of claim 1, wherein the predictive channel selection comprises predicting what channel will be selected next.
6. The method of claim 5, wherein the predicting step comprises analyzing a user's channel changing activities to determine if the user is moving sequentially up or sequentially down in program channels.

7. The method of claim 5, wherein the predicting step comprises receiving user input concerning program channels to be selected.
8. The method of claim 5, wherein the predicting step comprises storing historical information concerning channel changing patterns and using the historical information in determining channels to be pre-selected.
9. The method of claim 1, further comprising storing at least a portion of the digital video transport streams in a storage system.
10. The method of claim 1, wherein the digital video transport streams include MPEG2 compression.
11. The method of claim 1, wherein the channel signal spectrum comprises a satellite digital video broadcast, a cable digital video broadcast, a terrestrial digital video broadcast, video broadcast over DSL, video broadcast over cable modem or video broadcast over broadband Internet.
12. A multiple tuner receiver system including transport stream and channel selection circuitry for helping reduce delay time in channel-changing, comprising:
 - a first receiver including a tuner, the first receiver configured to have a channel signal spectrum as an input and to have a first digital video transport stream as an output, the channel signal spectrum including a plurality of program channels;
 - at least one additional receiver including a tuner, the additional receiver configured to have the channel signal spectrum as an input and to have a second digital video transport stream as an output; and
 - transport stream and channel selection circuitry configured to provide a first control signal to the first receiver indicating a first transport stream to be tuned and configured to provide at least one additional control signal to each additional receiver indicating at least one additional transport stream to be tuned, the additional transport streams being selected based at least in part upon predictive channel selection and which program channels are multiplexed together in the transport streams.
13. The multiple tuner receiver system of claim 12, wherein the receivers are integrated on the same integrated circuit.

14. The multiple tuner receiver system of claim 13, further comprising a decode processor configured to process the transport streams and to output a plurality of program channels from the transport streams.
15. The multiple tuner receiver system of claim 14, wherein the decode processor outputs a plurality of program channels from each transport stream to produce a plurality of video streams.
16. The multiple tuner receiver system of claim 15, wherein the decode processor is integrated on the same circuit as the receivers.
17. The multiple tuner receiver system of claim 12, wherein the predictive channel selection comprises a prediction of what channel will be selected next.
18. The multiple tuner receiver system of claim 12, further comprising a storage system configured to store at least a portion of the digital video transport streams.
19. The multiple tuner receiver system of claim 12, wherein the digital video transport streams include MPEG2 compression.
20. The multiple tuner receiver system of claim 12, wherein the channel signal spectrum comprises a satellite digital video broadcast, a cable digital video broadcast, a terrestrial digital video broadcast, video broadcast over DSL, video broadcast over cable modem or video broadcast over broadband Internet.